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Dated: 3/16/04 Signatu

(Anna P. Lucey)

Docket No.: ESCL-P01-124

(PATENT)

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Clarke et al.

Examiner: Not Yet Assigned

Application No.: 10/629933

Confirmation No.: 9050

Filed: July 29, 2003

Art Unit: 1645

For:

MULTI-STEP METHOD FOR THE DIFFERENTIATION OF INSULIN POSITIVE, GLUCOSE RESPONSIVE

**CELLS** 

### **INFORMATION DISCLOSURE STATEMENT (IDS)**

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached Form PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement was filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

A copy of each foreign patent and non patent reference listed on the attached Form PTO/SB/08 has been included.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such (37 CFR 1.97(h)).

Application No.: 10/629933 Docket No.: ESCL-P01-124

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents should one or more of the documents be applied against the claims of the present application.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 18-1945, under Order No. ESCL-P01-124.

Dated: March 26, 2004

MAR 2 6 20C4

Respectfully submitted,

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Attorneys/Agents For Applicant

PTO/SB/08a/b (08-03)
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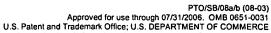
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Application Number	10/629933
Filing Date	July 29, 2003
First Named Inventor	Diana Clarke
Art Unit	1645
Examiner Name	Not Yet Assigned
Attorney Docket Number	ESCL-P01-124

Complete if Known

BF	Mather, J.P. et al. Activins, Inhibins, and Follistatins: Further Thoughts on a Growing Family of Regulators. P.S.E.B.M. 215, 209-222 (1997).
BG	Nielsen, J.H. et al. Beta cell proliferation and growth factors. J. Mol. Med. 77, 62-66 (1999).
BH,	Offield, M.F. et al. PDX-1 is required for pancreatic outgrowth and differentiation of the rostral duodenum. Development 122, 983-995 (1996).
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BJ (	Perry, D. Patients' Voices: The Powerful Sound in the Stem Cell Debate. Science 287, 1423 (25 Feb. 2000).
BK °	Peters, C.T. et al. A Glucagon-Like Peptide-1 Receptor Agonist and an Antagonist Modify Macronutrient Selection by Rats. J. Nutr. 131, 2164-2170 (2001).
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Li	

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Signature	Considered



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Application Number	10/629933		
Filing Date	July 29, 2003		
First Named Inventor	Diana Clarke		
Art Unit	1645		
Examiner Name	Not Yet Assigned		
Attorney Docket Number	ESCL-P01-124		

	U.S. PATENT DOCUMENTS				
Examiner Initials*	Cite No.1	Document Number  Number-Kind Code <sup>2</sup> ( if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	6,326,201-B1	12-04-2001	Fung et al.	

	FOREIGN PATENT DOCUMENTS						
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages		
Initials*	No.1	Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	MM-DD-YYYY	Applicant of Cited Document	or Relevant Figures Appear	🎌	
	AB	WO 95/18856-A1	07-13-1995	Harvard College			
	AC	WO 96/17924-A2	06-13-1996	Johns Hopkins University			
	AD	WO 00/47720-A2	08-17-2000	Ontogeny, Inc.			
	AE	WO 02/12452-A2	02-14-2002	Curis, Inc.			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at <a href="www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

•		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	AF,	Abraham, E.J. et al. Insulinotropic Hormone Glucagon-Like Peptide-1 Differentiation of Human Pancreatic Islet-Derived Progenitor Cells into Insulin-Producing Cells. Endocrinol 143(8), 3152-3161 (2002).	
	AG *	Ahlgren, U. et al. The morphogenesis of the pancreatic mesenchyme is uncoupled from that of the pancreatic epithelium in IPF1/PDX1-deficient mice. Development 122, 1409-1416 (1996).	
	АН	Apelqvist, A. et al. Sonic hedgehog directs specialized mesoderm differentiation in the intestine and pancreas. Curr. Biol. 7, 801-804 (1997).	
	Al '	Aziz, A. and Anderson, G.H. Exendin-4, a GLP-1 Receptor Agonist, Modulates the Effect of Macronutrients on Food Intake by Rats. J. Nutr. 132, 990-995 (2002).	
	AJ ^	Bonner-Weir, S. et al. A Second Pathway for Regeneration of Adult Exocrine and Endocrine Pancreas. Diabetes 42, 1715-1720 (Dec. 1993).	
	AK •	Bosco, D. et al. Homologous but Not Heterologous Contact Increases the Insulin Secretion of Individual Pancreatic B-Cells. Exp. Cell Res. 184, 72-80 (1989).	
	AL	de Kretser, D.M. et al. Inhibins, activins and follistatin in reproduction. Human Reprod. Update 8(6), 529-541 (2002).	
	AM '	Dell, G. et al. Regulation of a promoter from the mouse insulin like growth factor II gene by glucocorticoids. FEBS Letters 419, 161-165 (1997).	
	AN <sup>3</sup>	Doyle, M.E. and Egan, J.M. Glucagon-Like Peptide 1. Recent Prog. Horm. Res. 56, 377-399 (2001).	

Examiner	Date	
Signature	Considered	

PTO/SB/08a/b (08-03)
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Filing Date	July 29, 2003			
First Named Inventor	Diana Clarke			
Art Unit	1645			
Examiner Name	Not Yet Assigned			
Attorney Docket Number	ESCL-P01-124			

A	0.	Edlund, H. Transcribing Pancreas. Diabetes 47, 1817-1823 (Dec. 1998).	
A	νΡ,	Edlund, H. Developmental Biology of the Pancreas. Diabetes 50 (Supp.1), S5-S9 (Feb. 2001).	
Α	Q ·	Comparison of Nondiabetic State to Type 2 Diabetes. J. Clin. Endocrinol. Metab. 87(3), 1282-1290 (2002).	
A	R'	Elghazi, L. et al. Role for FGR2IIIb-mediated signals in controlling pancreatic endocrine progenitor cell proliferation. PNAS 99(6), 3884-3889 (19 March 2002).	
A	S ~	Fernandes, A. et al. Differentiation of New Insulin-Producing Cells is Induced by Injury in Adult Pancreatic Islets. Endocrinol. 138(4), 1750-1762 (1997).	
		Finley, M.F.A. et al. Synapse Formation and Establishment of Neuronal Polarity by P19 Embryonic Carcinoma Cells and Embryonic Stem Cells. J. Neurosci. 16(3), 1056-1065 (1 Feb. 1996).	
A	W,	Gaddy-Kurten, D. et al. Inhibition Suppresses and Activin Stimulates Osteoblastogenesis and Osteoclastogenesis in Murine Bone Marrow Cultures. Endocrinol. 143(1), 74-83 (2002).	
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A	.W.	Githens, S. et al. Biochemical and Histochemical Characterization of Cultured Rat and Hamster Pancreatic Ducts. Pancreas 2(4), 427-438 (1987).	
A	x ′	Githens, S. The Pancreatic Duct Cell: Proliferative Capabilities, Specific Characteristics, Metaplasia, Isolation, and Culture. J. Ped. Gastroenterol. Nutr. 7, 486-506 (1988).	
A	Y	Kaczorowski, D.J. et al. Glucose-responsive insulin-producing cells from stem cells. Diabetes Metab. Res. Rev. 18, 442-450 (2002).	
A	٧Z٠	Korbutt, G.S. et al. Islet Transplantation. Adv. Exp. Med. Biol. 426, 397-410 (1997).	
· E	BA •	Lambillotte, C. et al. Direct Glucocorticoid Inhibition of Insulin Secretion. J. Clin. Invest. 99, 414-423 (1997).	
E	3B •	Lampeter, E.F. et al. Regeneration of Beta-cells in Response to Islet Inflammation. Exp. Clin. Endocrinol. 103, 74-78 (1995).	
E	C.	Lumelsky, N. et al. Differentiation of Embryonic Stem Cells to Insulin-Secreting Structures Similar to Pancreatic Islets. Science 292, 1389-1394 (18 May 2001).	
E	3D	Madsen, O.D. et al. Pancreatic development and maturation of the islet B cell Studies of pluripotent islet cultures. Eur. J. Biochem. 242, 435-445 (1996).	
E	3E	Maldonado, T.S. et al. Ontogeny of Activin B and Follistatin in Developing Embryonic Mouse Pancreas: Implications for Lineage Selection. J. Gastrointest. Surg. 4, 269-275 (2000).	
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Examiner		Date	
Signature		Considered	

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BW Welt, C. et al. Activins, Inhibins, and Follistatins: From Endocrinology to Signaling. A		
,	Paradigm for the New Millennium. Exp. Biol. Med. 227, 724-752 (2002).	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered, include copy of this form with next communication to applicant.

Examiner	Date	
Signature	Considered	

<sup>1</sup>Applicant's unique citation designation number (optional). 2Applicant is to place a check mark here if English language Translation is attached.